

will hardly find any direct clinical statement in the book which is entirely new, but the arrangement of the subject, which, by the way, has never been handled similarly, as well as the sound discussion, render the book worthy of careful reading. H. G.

IV.—ACUTE ASCENDING PARALYSIS.

- I. RECHERCHES SUR LES LÉSIONS DU SYSTÈME NERVEUX DANS LA PARALYSIE ASCENDANTE AIGUE. Par le Dr. J. Dejerine, Ancien Interne des Hôpitaux de Paris, Membre lauréat de la Société Anatomique (Prix Godard, 1879). Paris, 1879. (*Researches in regard to Lesions of the Nervous System in Acute Ascending Paralysis.*)
- II. CONTRIBUTION A L'HISTOIRE DES NEVRITES—NEVRITES DISSEMINÉES. Par le Dr. J. Gros, Ancien Interne des Hôpitaux de Lyon. Paris, 1879. (*Contribution to the History of Neuritis.*)

Since Landry, in 1859, first directed attention to them, a class of cases of paralysis have, in great measure, been a puzzle to pathologists. At first it was hardly credited that they constituted a distinct disorder, and they were considered by most writers to be only peculiar instances of rapid myelitis, to which they have much resemblance in their clinical features. But carefully reported observations by such observers as Vulpian, Hayem, Westphal, and others, have demonstrated, at least approximately, that they deserve to rank as a distinct affection, pathologically and even clinically separate from any ordinary forms of myelitis or other spinal disorder. The two monographs, the titles of which head this notice, are among the latest contributions to the literature of the subject, and as such they deserve our attention.

M. Dejerine's memoir is a critical study of the pathology of the disorder. He first opens with a historical review of the subject, in the course of which he also lays down the plan on which he proposes to treat the subject. He shows how, in late years, while the researches of Charcot, Vulpian, and others, at the Salpêtrière had elucidated the pathology and history of myelitis, that a few careful observations by Pellegrino Levi, Petitfils, Hayem and Westphal, in which careful microscopic examinations were made of the cord, and no lesions discovered, have given ground for the recognition of Landry's disease as a distinct morbid species. Some observations he rejects as imperfect, such as those of Chalvet and Calastri, and all those in which the case terminated otherwise than fatally, and with an autopsy. He believes with Vulpian, that there is no proof that these latter were actually cases of acute ascending paralysis of Landry, as-

suming that no well authenticated case of the disease has terminated in recovery; we shall have occasion to notice this manner of view farther on.

M. Dejerine begins his second chapter with the statement that he had been led to give special attention to the spinal nerve roots and with a brief account of his methods of microscopic preparation. His memoir is essentially an anatomico-pathological one, and the clinical features of Landry's disease are not its main objects. Nevertheless, these features form the subject of this second chapter, which is made up chiefly of the history and discussion of two cases of the disorder; one a personal observation of the author, now for the first time published, and the other a re-statement of a case already reported by MM. Dejerine and Goetz, in the *Archives de Physiologie* for 1876. These cases leave little or nothing to ask for in regard to completeness of the clinical record; this is especially the case with the first, which the author considers a typical case of acute ascending paralysis. He sums up its clinical history as follows: "The patient, without any pathological antecedents, entered the hospital on account of a certain degree of weakness of the legs, of which he had been complaining for a few days; this motor trouble was so little apparent that we first suspected malingering. After a few days, however, there was observed a slight choreic condition in the execution of movements, then, suddenly, seven days after his admission, he was seized with paraplegia, at first slight, then becoming complete, it ascended, gained the trunk and upper members, and proved fatal in seven days from asphyxia. During the whole duration of the disease the sensibility remained absolutely normal; no trophic skin disorder, no paralysis of the sphincters, no fever, save on the last day. Very well-marked diminution of electric contractility."

We might as well here give our author's general description of the disorder which follows the discussion of his second case, and presents a clinical picture of the affection as M. Dejerine understands it. He says: "In these two cases we have to do with individuals in previous good health, who are seized suddenly and without any appreciable cause, with weakness of the limbs. This paraplegia presents the characters that struck Landry's attention, and which have been observed by nearly all of his successors. At first slight, it rapidly increases and becomes complete; it is a flaccid paralysis without contractions or any exaggeration or abolition of reflex movements, which are generally normal as in our cases. We cannot, by the brusque flexion of the foot, produce any of the phenomena studied in France under the name of 'reflex tremor of the foot.' * * * The percussion of the patellar or Achilles tendons causes none of the special reflexes studied in Germany in later years by Erb and Westphal. In a word, the paraplegia is absolute, without appreciable exaggeration of any reflex phenomena.

"Then after a longer or shorter time, generally within one or

two days, the paralysis gradually ascends, it reaches the muscles of the abdomen, the thorax, the arms, the respiration becomes more and more exclusively diaphragmatic, the diaphragm itself becomes involved, and the patient dies asphyxiated in a few days from the beginning.

"This rapidity of the progress of the paralysis has been noticed by all observers; it is sometimes astonishingly rapid, and causes death in two or three days. As in other previous observations, we note in our two cases the absolute retention of the sensibility of all forms, tact, temperature, pain; this symptom is of great specific value, and in the majority of the cases published to date, we have always found this function unimpaired or very slightly affected. * * * The skin and the cellular tissue are intact during the whole progress of the disease, there is no œdema, none of the cutaneous trophic disorders so frequent and rapidly developing in acute myelitis.

"Finally, as regards various viscera, we have met with no symptom that could be attributed to a medullary affection. The temperature in one of our two cases was normal during the whole course of the disorder except on the day of his death; in the other it varied each evening, some tenths of a degree above the normal."

The post-mortem examination in each case revealed nothing abnormal in the cord or medulla, but the anterior spinal nerve roots were found more or less altered or atrophied, and in the first this could also be traced in the intra-muscular nerves; the posterior roots were healthy.

Having thus given an account both historical and clinical of the disorder, M. Dejerine devotes the remaining portion of his memoir to its pathology. The results of examinations, so striking for the absence of spinal, and the presence of nerve-root lesions, are taken up and discussed with all the light that can be thrown by the researches of others as found in medical literature. First is asked the question, Is the alteration of the nerve roots, which is found in these cases and which is identical with the degeneration of the Wallerian section of nerves, merely a passive process or a neuritis? He concludes that the latter is the case, and not an interstitial, but a parenchymatous neuritis, and adopts the view of Waller and Vulpian, that the trophic influence for these anterior nerve roots is derived from the anterior grey cornua of the cord, rather than that of Cl. Bernard, who held that the spinal influence was inhibitory and modulating instead of exciting. But the nature of the special lesion itself is not the most important matter; how it is brought about is the most important question of the pathology of the disease. And here comes in the question, that has been discussed for a number of years, especially in Germany, as to the existence of a genuine disseminated neuritis, a *neuritis migrans* passing from the nerve to the cord and from nerve to nerve, not preserving its continuity necessarily, as an actual inflammation at all points. M. Dejerine considers this an un-

demonstrated hypothesis, at least so far as a generalized disseminated neuritis is concerned. An observation of Eichhorst's, which that author had called a case of *neuritis migrans* or neuritis ascendens, is quoted and discussed. It appears to us to be simply a well-marked case of Landry's disease, but with some peculiarities, such as sensory involvements that separate it from the usual type of cases of this disorder. The cord and brain were found apparently intact, but the nerves of the arms were found to be in a condition of active congestion; the anterior roots and the peripheral nerves of other portions of the body were not examined. The case is in itself incomplete, but it is suggestive, and there is nothing but purely negative evidence, and that due to its imperfect examination, to prevent its being classed as a case of acute ascending paralysis. Our author is therefore, we think, correct in his judgment as to the proper reference of this case.

The discussion of the facts and theories of neuritis and their application to pathology in the cases of atrophies, reflex paralyses, etc., is close and full, and the author concludes, himself, that the only plausible hypothesis to account for the degenerations in the nerve roots met with in these cases of ascending paralysis is that of an alteration of the anterior grey matter of the cord. But he leaves us in doubt as to what the alteration may be, favoring, however, the idea that it is a purely dynamic one, modifying the trophic action of the centres in the anterior grey horns, instead of, as he says, an ascending neuritis. The caution with which he guards his statement of belief in the alterations of these anterior horns, seems to us needless. The possibility of a protopathic neuritis affecting the anterior roots simultaneously without participation of the cord, is too great a tension on a reasonable imagination to be admitted, according to our view of the case.

The theory of a general toxæmic condition developing itself in Landry's disease, especially on the cord, that has with certain reservations been supported by some authors of note, such as Hayem and Westphal, is not credited by M. Dejerine, who could discover no evidence of any toxæmic conditions in the two cases that came under his own observation. The clinical features of the disease as well as the revelations of the autopsy exclude myelitis; the affinity with anterior polio-myelitis that has been maintained by some, is likewise discredited on account of the absence of anatomically demonstrable alterations of the anterior spinal horns. The author adds, that there is in the clinical progress of ascending paralysis a capital point of difference between it and myelitis of the anterior horns: that is, its constant fatal termination. We would only say in regard to this, that if, as M. Dejerine seems to hold, an autopsy is essential to confirm the diagnosis, it is too much to say that the clinical history affords adequate means to its recognition. As stated earlier, he rejects all reported cases that terminated in recovery from the category

of Landry's disease; a practice common enough among exact pathologists, in reference to obscure or unfrequent disorders, but one which when generalized upon as in the present case appears to us to involve as much of assumption as anything that these same generalizers condemn.

A noticeable omission in the discussion of neuritis migrans, which takes up so large a part of the monograph, is that of any mention of the pathological and clinical history of tetanus, which so frequently suggests ascending neuritis. Indeed, we have long been of the opinion that it could have no other pathological process for its basis, and nothing in any recent researches has justified any change of views.

The conclusions of the memoir are stated by the authors as follows:

1. "There exists in certain cases of ascending paralysis an alteration of the anterior roots.
2. "This alteration, which involves a certain number of fibres in each root, is likewise met with in the muscular nerves.
3. "This alteration, analogous to that which we observe in the peripheral end of a divided nerve, is probably of an inflammatory nature (parenchymatous neuritis).
4. "We do not believe that this alteration of the roots is primary, or that it constitutes the sole lesion of ascending paralysis; we believe, rather, that it is consecutive to an alteration of the grey substance of the spinal cord, an alteration as yet inaccessible to our present means of investigation, but which seems probable from the clinical progress of the disease."

M. Gros' memoir is on a somewhat different plan from the other, though treating of the same subject. Instead of a close, critical discussion of pathology, we have a comprehensive paper on a class of cases of which the paralysis of Landry is only one type or termination. Dr. Gros includes under his head of disseminated neuritis, three categories of cases, of which he gives ten observations in full detail, culled from the writings of Dumenil, Lancereaux, Desnos and Pierret, Tripier, Eichhorst and others. The following are his three forms of disseminated neuritis:

I. "An acute form lasting three weeks (obs. IX.), but too rapid to permit muscular atrophy to be clinically demonstrated, and terminating in death.

II. "A sub-acute form lasting from six months to a year, in some instances terminating in recovery, and remaining localized in one point, with more or less complete recuperation of movement, but with no assurance against a new attack (obs. II., III., IV., VI., X), but in other cases terminating in death (obs. VI.).

III. "A chronic form, the most frequent, may continue as long as five years (obs. I., V.). It is in this form that we can now rank obs. VIII., where the disease remaining quiet and without revealing itself otherwise than by a few pains, for a period of

thirty-six years, suddenly revived and killed the patient in a few days."

It will be seen from the above that M. Gros' disseminated neuritis includes a large class of cases not exactly corresponding in clinical history with the typical acute ascending paralysis of Landry. Nevertheless, if the species is to be based on the pathological lesions so far as known, rather than on the symptoms, he is right in his classification, as it appears to us.

Of course with so many of these cases having a possibly favorable termination, the question of treatment is of importance. After his chapters on diagnosis, etc., the author ends his memoir with one on the medical and surgical management of the disorder. Besides the measures indicated on general principles, electricity, counter-irritation, etc., he mentions among the appliances that may be employed, hypodermic injections of nitrate of silver and chloroform, and the operation of neurotomy. The memoir, without being very profound or exhaustive, is well worthy of attention.

SHORTER NOTICES.

- I. **PHYSIOLOGY AND HISTOLOGY OF THE CEREBRAL CONVOLUTIONS. ALSO, POISONS OF THE INTELLECT.** By Chas. Richet, A. M., M. D., Ph. D. Translated by Edward P. Fowler, M. D. New York: Wm. Wood & Co., 1879. 170 pages. Chicago: Jansen, McClurg & Co.
- II. **DIE FURCHEN UND WULSTE AM GROSSHIRN DES MENSCHEN.** Zugleich als Erläuterung zu dem Hirnmodell. Von Ad. Pansch, Professor an der Universität Kiel. Berlin, 1879.
- III. **MATERIA MEDICA AND THERAPEUTICS. VEGETABLE KINGDOM.** By Charles D. F. Phillips, M. D., F. R. C. S. E. Edited and adapted to the U. S. Pharmacopœia, by Henry S. Piffard, A. M., M. D. New York: Wm. Wood & Co., 1879. Chicago: W. T. Keener.
- IV. **THE MULTUM IN PARVO REFERENCE AND DOSE BOOK.** By C. Henri Leonard, M. A., M. D. Third edition. Revised and enlarged. Detroit, 1879.
POCKET THERAPEUTICS AND DOSE BOOK, with classification and explanation of Medicines, etc., etc. By Morse Stewart, Jr., B. A., M. D. Second edition, revised and enlarged. Detroit, Mich.: Geo. D. Stewart, 1878.
- V. **ANALYSIS OF THE URINE,** with Special Reference to the Diseases of the Genito-Urinary Organs. By K. B. Hofmann and R. Ultzmann. Translated by T. Barton Brune, M. D., and H. Holbrook Curtis, Ph. B. New York: D. Appleton & Co., 1879. 269 pages, 8 pl. Chicago: Jansen, McClurg & Co.